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ABSTRACT

This final report describes activities and accomplishments of a 3-year, federally supported project at the University of Alabama (Tuscaloosa) to improve the retention of African-American students in undergraduate premedical programs by developing an improved personal and social support system for black students interested in the health professions. A Student Support System (SSP) emphasizing peer group involvement, leadership by a special advisor, and professional role model contacts was established. Program success was indicated by a substantial increase in the number of African-American students applying to health professional schools; 58 percent have matriculated in professional schools. These results represented a twofold increase compared to the preceding 8 years. A substantially greater retention rate was also found for SSP participants when compared with nonparticipants. However, the goal of improving the academic record and entrance-test qualifications of participants was not achieved. Program evaluation also indicated the importance of the SSP advisor as a source of support for students. Attached tables detail the project's results. (DB)

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A Comprehensive Support System for Improving Retention of Black Students in Premedical Programs

ED 414 855

Cover Sheet

Grantee Organization:

The University of Alabama
College of Arts and Sciences
Box 870268
Tuscaloosa, AL 35487-0268

Grant Number:

P116BO1154

Project Dates:

Starting Date: September 1, 1990

Ending Date: August 31, 1993

Number of Months: 36

Project Director:

Robert H. Garner
College of Arts and Sciences
The University of Alabama
Box 870268
Tuscaloosa, AL 35487-0268

FIPSE Program Officer: Dave Johnson

Grant Award:

Year 1	$42,780
Year 2	42,000
Year 3	37,976
Total	122,756

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A Comprehensive Support System for Improving Retention of Black Students in Premedical Programs

Project Summary

The need for improving the retention of African-American students in undergraduate programs of study leading to admission to medical and other health professional schools is being addressed by developing an improved personal and social support system for black students with this career goal. With the leadership of a special advisor, a Student Support System emphasizing peer group involvement and professional role model contacts has been established. Significant gains in professional school applications and admissions have been achieved. The results are more attributable to improved student persistence than improved student performance.

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Project Title: "A Comprehensive Support System for Improving Retention of Black Students in Premedical Programs"

Address: The University of Alabama, Tuscaloosa, AL 35487

Project Director: Robert H. Garner (205-348-5970)

EXECUTIVE SUMMARY

A. Project Overview. This project addressed the need for greater retention of African-American students in undergraduate programs of study at the University of Alabama preparing students to enter medical and other health professional schools. With the leadership of a special advisor, a Student Support Program (SSP) emphasizing peer involvement and professional role model contacts was established to encourage students to persist in health career interests and to achieve competitive qualifications for admission to professional study.

B. Purpose. African-Americans are underrepresented in the health professions nationally and regionally. The purpose of the project was to raise and maintain the percentages of African-American students applying to and being accepted by Health Professional schools to a level equal to the percent of African-Americans in the University student population.

C. Background and Origins. In the 1980s it was observed that the proportion of entering first year African-American students among all students expressing a goal of attending medical and other health professional schools was approximately the same as the proportion of African-American students in the overall student body at the University of Alabama. The retention of African-American prehealth professional students, however, was less than that for all students with this professional goal. As a result the number of African-American students applying to and being accepted by medical and other health professional schools was only about half of the number expected for proportional representation. Admissions offices at state and area health professional schools are attempting to increase enrollments of qualified African-American students. Black professionals in the area have shown interest in encouraging more black students to prepare for the health professions. With the advice and assistance of these available resources, a program bringing special support and encouragement to African-American students interested in the health professions was proposed to achieve a goal of proportional representation of African American students.

D. Project Description. Principal components of the program are:

(1) The needs of African-American students interested in health professions are being served by a full time advisor. This position, established by FIPSE grant funds, is being continued in 1993-94 with University of Alabama support. Having a person with responsibilities specifically assigned to students with this interest has a demonstrable effect in increasing student perceptions of support.

(2) The needs of African-American students interested in health professions is being served further by the establishment of a Student Support Program (SSP). The activities of the SSP include:

(a) SSP group meetings are held once every two weeks. Group meetings provided the basis for development of peer support and information sharing.

(b) The SSP regularly schedules contacts with black health professional role models. The major vehicle for such contacts has been as speakers for SSP group meetings. Over 30 black health professionals were involved over the past three years. Professions represented included medicine, dentistry, optometry, and physical therapy. Approximately half of the professional role models were women.

(c) The SSP arranges field experiences such as visits to local clinics and private practice offices where black professionals work, and trips to area medical centers including visits at predominantly black medical centers in Nashville and Atlanta.

(d) The SSP arranges or assists students in arranging individual enhancement experiences in the health professions. These included opportunities to spend time with practicing black health professionals and attending summer enhancement programs at medical centers.

(e) The SSP attempts to organize peer support groups with student leaders. In the first year groups were established with cross sectional representation of the targeted student population. In the last two years attempts were made to organize groups around the focal interests of students in key undergraduate courses required by health professional schools or preparation for professional school entrance examinations.

(3) The full time advisor and others involved in the SSP are regularly involved in external contacts for the purpose of gaining information and ideas relative to the retention of minority students. External contacts were also pursued in order to provide information on SSP participants to professional schools in support of current or future applications, and to disseminate ideas about the program to other institutions with related interests. Closely related to this effort has been an ongoing evaluation of the effectiveness of SSP activities.

E. Evaluation/Project Results. Success was achieved in the three year period of the FIPSE grant in the program goal of increasing the number of African-American students applying to and being accepted by health professional schools to levels proportional to the overall percentage of black undergraduates at the University of Alabama. In the past three years 36 African-American students applied to health professional schools. This number constituted 13% of the 275 University of Alabama students applying to such schools in the same period, a percentage slightly higher than the overall 9-10% enrollment of African-American students at the University. Of the 36 applicants, 21 have matriculated in professional schools. This 58% success rate compares favorable with both national statistics and overall success rates of University of Alabama graduates. (The success rate is higher if reapplicants are included.) These results represent greater than a two fold increase compared to the preceding eight years.

A favorable correlation of SSP participation and retention was noted. In a comparison of 70 SSP participants with 69 non-participants, 15 SSP participants

graduated compared to 12 non-participants. Nineteen non-participants left school compared to 7 participants.

The activities of the program were given favorable evaluations. Satisfactory participation levels were sustained over the three year period.

The program evaluation data indicates success in improving the perception of social support on the part of SSP participants. Of particular interest is the indication of the importance of the advisor as a source of support. Very modest success is suggested by the data in the goal of improving the sense of self esteem for participants.

The program efforts directed toward improving the academic record and entrance test qualifications of participants did not result in significant success. Although SSP students usually had higher grades than the identified non-SSP comparison group, and more often showed a semester-by-semester GPA improvement, the differences were not significant. Insufficient data was obtained to evaluate the possible effect of the program on entrance test outcomes.

F. Summary and Conclusions. Underrepresentation of minorities in professional practice and in programs of study leading to those professions can be remedied in part by efforts to focus attention on the problem and direct resources toward specific solutions. Having a person identified by students as a source of support is probably the single most important step in improving retention. A program of activities is helpful in peer support and sustaining student interest, especially if contacts with professional schools and practicing role models are emphasized. Taken together, these efforts are important factors in encouraging persistence and to a limited extent the self-confidence of students in working toward goals.

Improving the quantitatively measurable qualifications of minority preprofessional students is a more difficult task and was not demonstrably achieved by this project. This result, however, should not discourage efforts in this direction. More intensive and structured programs, as well as longer term efforts probably have a greater chance of success.

Project Title: A Comprehensive Support System for Improving Retention of Black Students in Premedical Programs" (#P116B01154-920)

Grantee Address: University of Alabama, Tuscaloosa, AL 35487

Project Director: Robert H. Garner
(205)-348-5970

FINAL REPORT

A. Project Overview.

This project addressed the need for higher retention levels of African-American students in undergraduate programs of study at the University of Alabama which prepare students to enter medical and other health professional schools. The project was initiated by the appointment of a full-time advisor to work with African-American undergraduates and the project activities were implemented through a Student Support Program (SSP). The SSP activities provided a setting for peer involvement and professional role model contacts that encouraged African-American students to persist in health career interests and to achieve competitive qualifications appropriate for reaching goals of admission to professional study.

B. Purpose.

African-Americans are underrepresented in the health professions nationally and regionally. The percentage of black health professionals is roughly half the percentage of African-Americans in the total population. Although significant increases in the percentages of black in health professional schools was note in the late sixties and seventies, the growth in the percentage has levelled off in the eighties. All remedies to this situation are relatively long term in nature. The one chosen for this project is to raise and maintain the percentages of African-American students applying to and being accepted by Health Professional schools to a level equal to the percent of African-Americans in the population. At the University of Alabama that required at least a two fold increase (doubling) in the number of African-American applicants to and matriculants in health professional schools.

C. Background and Origins.

Preparation for admission to health professional schools is a goal of a reasonably large number of students entering the University of Alabama. In the 1980s it was observed that the proportion of African-American students in this group was approximately the same as the proportion of African-American students in the overall student body. During the three-four years of study prior to becoming applicants to health professional schools, however, the retention of African-American students was less than that for all students with this professional goal. The result was that the number of African-American students applying to and being accepted by

medical and other health professional schools was only about half of the number expected for proportional representation. Specifically, in the period of 1982-1990 the number of African-American students at the University of Alabama applying to health professional schools averaged only two or three a year. At least twice that number would have been required for proportional representation of the 9-10% black enrollment at the University.

It has been observed over time that successful premedical students tend to develop informal social support systems, or stated more informally, they hang around together a lot. Although they are very competitive, it tends to be a constructive competitiveness. Their common goals brings them together in more ways than merely attending the same classes and laboratories. It was thought that this type of support develops less readily for African-American students, partly because of their lesser numbers and partly due to other less understood factors. In any event it was thought that a key element in improving retention of African-American students in premedical programs was to build more effective personal support systems for them.

The Health Professions Advising program at the University of Alabama works closely with admissions offices at state and area health professional schools and is aware of the concern of these schools to increase their enrollments of qualified African-American students. Also, black professionals in the area have expressed an interest in encouraging more students to prepare for the health professions. With the advice and assistance of these available resources, a program bringing special support and encouragement to African-American students interested in the health professions was proposed with the goal of achieving proportional representation within a few years.

D. Project Description.

After considering a number of options, a decision was made in this program to address the retention problem with a program to improve the support system experienced by black undergraduates pursuing programs of study that would prepare them for admission to health professional schools. Advising resources, peer relationships, and experiences with professional role models were the major noncognitive approaches incorporated into the plan. The program did not attempt to address the problem through any of the traditional cognitive approaches such as tutorial, remediation or supplemental instruction programs except to act as a referral avenue when appropriate.

The principal components of the program are:

(1) The needs of African-American students interested in health professions are being served by a full time advisor. This position, established by funds from the FIPSE grant, was filled in 1990-92 by Mr. Aaron Dobynes, and since September 1992 has been held by Ms. Cynthia Moore. The position is being continued in 1993-94 with University of Alabama support. Having a person with responsibilities specifically assigned to students with this interest had a demonstrable effect in increasing student perceptions of support.

(2) The needs of African-American students interested in health professions is further served by the establishment of a Student Support Program (SSP). The activities of the SSP include:

(a) SSP group meetings are held once every two weeks. Group meetings provide the basis for development of peer support and information sharing. Attendance ranged from less than ten to more than 30 with an average of approximately 14.

(b) The SSP regularly schedules contacts with black health professional role models. These include black practicing professionals from the local area and several other localities in the state, medical students and residents from the University of Alabama School of Medicine campuses in Tuscaloosa and Birmingham, and visitors from a number of health professional schools and medical centers in the state and beyond including Meharry Medical School in Nashville and the Mayo Clinic in Rochester, MN. The major vehicle for such contacts are as speakers for SSP group meetings. Arrangements were made for some students to spend time working as volunteers with black professional role models.

Approximately 30 black health professionals were involved as role models over the past three years. Professions represented included medicine, dentistry, optometry, and physical therapy. Approximately half of the professional role models were women.

(c) Field experiences are considered an important means to enhance interest of students in the health professions. At least four such experiences were scheduled each year. Included were visits to local clinics and private practice offices where black professionals work. A balance between private practice facilities and public health clinics was maintained. Trips to area medical centers also werescheduled. These included the University of Alabama Medical Center in Birmingham, the University of South Alabama Medical Center in Mobile, Meharry Medical School in Nashville, and Morehouse and Emory Medicals Schools in Atlanta. Students were also taken to meetings for minority medical and premedical students sponsored by the Student National Medical Association in Birmingham (1991), the Association of American Medical College in New Orleans (1992), and the National Association of Medical Minority Educators in Nashville (1993).

(d) The SSP arranges or assists students in arranging individual enhancement experiences in the health professions. In some instances these are opportunities to spend time with practicing black health professionals. Other opportunities have been attending summer enhancement programs at the University of Alabama Medical Center in Birmingham and the Massachusetts General Hospital in Boston.

(e) The SSP attempts to organize peer support groups with student leaders. In the first year groups were established with cross sectional representation of the targeted student population. In the last two years attempts were made to organize groups around the focal interests of students in key undergraduate courses required by health professional schools or preparation for professional school entrance examinations.

(2) The full time advisor and others involved in the SSP are regularly involved in external contacts for the purpose of gaining information and ideas relative to the retention problem being addressed. Equally important has been the role of the staff in relaying information about SSP participants to the health professions schools where these students are applying, and disseminating ideas gained from SSP to persons at other institutions interested in addressing similar problems in retention. Closely related to this latter effort has been an ongoing evaluation of the effectiveness of SSP activities. The evaluation consisted of data maintained by the Health Professions Office summarized in Appendices A and B, and a evaluation summarized in Appendix C conducted by an external evaluator, Dr. Christine Nagy of the University of Alabama College of Community Health Sciences.

E. Evaluation/Project Results.

The most notable success of this project was achieving the goal of increasing the number of African-American students applying to and being accepted by health professional schools to a level proportional to the overall percentage of black undergraduates at the University of Alabama. Data in Appendix A gives details of the applications and matriculations at health professional schools of University of Alabama African American students in the three year period of the FIPSE grant, 1991-1993. Thirty six African-American students applied to medical, dental or optometry schools. These students constituted 13 % of the 275 University of Alabama students applying to such schools in the same period, a percentage slightly higher that the overall 9-10 percent enrollment of African-American students at the University. Of these 36 applicants, 21 matriculated in professional schools. This 58% success rate compares favorably with both national statistics and overall success rates of University of Alabama graduates. (Since six of the 36 applications were reapplications, including two successful ones, 21 of 30 persons applying were ultimately matriculated, representing a 70% success rate if reapplications are considered.) Most significantly, these averages of 12 applicants per year and seven matriculants per year among University of Alabama African-American preprofessional undergraduates represent greater than a two fold increase compared to the preceding eight years in the 1980s.

Appendix A also notes that four other students applied to and were accepted by postgraduate programs in other health related areas such as public health, biomedical research, podiatry, and health administration. These career goals were included in SSP objectives, and with these additions the average number of matriculating African-American students in the three year period is increased to over eight.

A favorable correlation of SSP participation and retention can be noted in Appendix B. In a comparison of 70 SSP participants with 69 non-participants, 15 SSP participants graduated compared to 12 non-participants. (See following paragraph for definition of SSP participants and non-participants). Nineteen non-participants left school compared to 7 participants.

The remaining points of evaluation are included in the external evaluation conducted by Dr. Christine Nagy. The report on this evaluation, including supporting tables, constitutes Appendix C. This report includes comparisons of SSP participants and non-participants. Participants are defined as students who participated in at least one SSP activity per semester. Non-participants are students who could be identified as expressing an interest in health professions at one time or other, but participation in the SSP less than once a semester. The amount of contact of students with the Health Professions Advisor was not a factor in determining a students status as a participant vs. non-participant, and therefore the impact of the advisor is not measured in these results.

The activities of the program received favorable evaluations as noted in Appendix C and supporting Tables 2 and 3. Table 4 of this appendix gives information concerning the satisfactory participation levels that were sustained over the three year period.

The program evaluation in Appendix C indicates success in improving the perception of social support on the part of SSP participants. Of particular interest is the indication in Tables 5 - 8 of the importance of the advisor as a source of support. The analysis in Appendix C suggests very modest success in the goal of improving the sense of self esteem for SSP participants.

Tables 9 and 10 provide data related to the program efforts directed toward improving the academic record and entrance test qualifications of participants. These efforts did not result in significant success. Although SSP students usually had higher grades than the identified non-SSP comparison group, and more often showed a semester-by-semester GPA improvement, the differences were not significant. Insufficient data was obtained to evaluate the possible effect of the program on entrance test outcomes.

F. Summary and Conclusions.

(1) Underrepresentation of minorities in professional practice and in programs of study leading to those professions can be remedied in part by efforts to focus attention on the problem and direct resources toward specific solutions. This may be an example of improvements resulting in part merely from the recognition of a problem and the demonstration of a sincere effort to address it.

(2) Appointment of a person who can be identified by the targeted student group as a source of support is probably the single most important step in improving retention in such programs of study. The personification

of an institution's concern is a key element in any success that is achieved. The personal attributes of individuals in this role is a crucial consideration.

(3) A program of activities is helpful in building the peer support and sustaining the level of student interest needed for greater retention of minority students in underrepresented programs of study. Especially effective are contacts with professional schools and practicing role models. In our experience, activities not directly related to classroom work were easier to arrange and proved effective, but had a greater impact on student persistence than student performance.

(4) Improving the quantitatively measurable performance qualifications of minority preprofessional students is a more difficult task and was not demonstrably achieved by this project. Improvements in academic grades and entrance test scores should be possible, however. In general, more intensive and structured programs should have a greater chance of success. Ideas we are considering include encouraging peer group study by forming cohort groups by registering students with similar interests in common sections of large enrollment courses, and seeking funding for intensive summer sessions to promote preparation for professional school entrance examinations.

(5) A continuing concern of this program has been to focus attention on the issue of retention of African-American students in prehealth professional programs without adding to the potential isolation these students may experience as a minority population group on campus. In this regard we hope to have been somewhat successful. Although only African-American students participated in most activities of the program, and an emphasis was placed on building peer support among African-Americans and having role model exposure to practicing black professionals, the program also encouraged participating students to identify with all preprofessional students and health practitioners. Information on non-SSP activities related to preprofessional study was regularly provided to participants and the general population of students had numerous contacts with the SSP advisor. As we look to the future, we hope to gradually expand the SSP to serve other groups of students, such as rural students, who may need assistance in building the personal support systems that enhance retention in some programs of study.

A presentation of the results of this project was made by Ms. Cynthia Moore at the South-Southeastern Regional Meeting of Academic Affairs Administrators (ACAFAD) in Mobile, AL on November 4, 1993. An effort will be made to incorpoarate the results in additional presentations and/or publications related to advising and retention issues.

G. Appendices

A. Data on Applicants, 1991-1993

B. Retention Data for 1991-1993

C. Program Evaluation Update, Fall 1993, with Tables

D. Information for FIPSE

APPENDIX A

1991 APPLICANTS

11 STUDENTS APPLIED - 7 ACCEPTED TO MEDICAL SCHOOL
65 TOTAL APPLICANTS FOR THE U OF A-11 BLACK APPLICANTS = 17%

SSN	NAME	MCAT							GPA
ACCEPTED									
418-92-6400	OMAR DANNER	9	11	11	9	5	6	= 51	3.603
420-13-6170	CEDRIC HARRIS	5	6	5	5	5	5	= 31	3.356
422-13-6176	TIM LEE	7	6	6	7	7	5	= 38	3.000
424-19-1030	ALLAN PICKENS	9	9	8	8	6	5	= 45	3.932
419-15-5640	RODNEY SMITH	6	7	6	7	5	5	= 36	3.402
416-11-8740	HENRY TOWNSEND	9	9	8	9	9	7	= 51	3.969
526-71-3561	MELINDA WILLIAMS	8	7	6	8	7	5	= 41	2.883
NOT ACCEPTED									
418-98-1416	WILLIAM BENNETT	2	5	3	3	7	5	= 25	3.040
419-13-5866	GRETCHEN HORTON	4	4	5	4	7	5	= 29	2.740
421-02-5985	URSULA NORFLEET	9	6	6	6	6	4	= 37	2.690
419-19-1023	KENNEDY MCMULLEN	4	5	7	5	7	5	= 33	3.180

NATIONAL AVG FOR MCAT SCORES 8.7 8.3 8.3 8.3 8.0 7.8=49.4
STANDARD DEVIATIONS FOR ALL MCAT AREAS RANGE FROM 2.3-2.5

1 STUDENT APPLIED - 1 ACCEPTED TO OPTOMETRY SCHOOL
6 TOTAL APPLICANTS FOR THE U OF A-1 BLACK APPLICANT = 16%

420-13-6170 CEDRIC HARRIS 3.356

1992 APPLICANTS

11 STUDENTS APPLIED - 7 ACCEPTED TO MEDICAL SCHOOL
88 TOTAL APPLICANTS FOR THE U OF A-11 BLACK APPLICANTS = 12%

SSN	NAME	MCAT				GPA
ACCEPTED						
418-98-1416	WILLIAM BENNETT	7	5	N	6 = 18	3.095
417-96-3972	VINCENT BIVINS	4	6	N	8 = 18	2.830
418-06-1417	DEMETRIUS HINES	8	5	N	5 = 18	3.450
417-19-4809	NATALIE IRBY	7	7	0	7 = 21	3.000
418-17-5962	LISA KING	8	7	N	7 = 22	2.663
419-19-1023	KENNEDY MCMULLEN	10	8	N	12 = 30	3.170
424-98-9823	GARY SLAUGHTER	4	6	N	7 = 17	2.540
NOT ACCEPTED						
820-21-1379	ERRICA AUTERY	6	5	0	4 = 15	2.883
419-08-6230	TONY GAYLE	4	3	M	5 = 12	1.949
421-02-5985	URSULA NORFLEET				18	2.690
416-13-2352	FELISHA WRIGHT	3	4	0	5 = 12	2.511

NATIONAL AVG FOR MCAT SCORES 7.9 7.8 0 7.9 = 23.6
STANDARD DEVIATIONS 2.4 2.3 2.4

2 STUDENT APPLIED - 2 ACCEPTED TO DENTAL SCHOOL
18 TOTAL APPLICANTS FOR THE U OF A-2 BLACK APPLICANTS=11%

423-21-1538 TRACIE CARTER 13 12 11 18 14 9 13 13 2.600
420-90-1533 JOHN STALLENS 18 15 16 19 21 16 18 18 2.673
SCORE OF 15 IS SET FOR NATIONAL AVERAGE

1 STUDENT ACCEPTED INTO MASTER'S IN PUBLIC HEALTH PROGRAM
424-17-4297 JOY PERDUE 2.751

1 STUDENT ACCEPTED INTO BIOMEDICAL GRADUATE RESEARCH
353-58-9569 CLARESSA LUCUS 3.746

1993 APPLICANTS-NUMBERS CAN'T BE DETERMINED EXACTLY UNTIL DEC OF 1993 WHEN THE AAMC NOVEMBER ROSTER IS OUT

9 STUDENTS APPLIED - 2 ACCEPTED TO MEDICAL SCHOOL
96 TOTAL APPLICANTS FOR THE U OF A-9 BLACK APPLICANTS=9%

SSN	NAME	MCAT	GPA
ACCEPTED			
418-04-5084	KIM EUBANKS	NOT AVAILABLE	3.284
418-02-6148	CALVIN F. AYERS,JR	NOT AVAILABLE	2.454
NOT ACCEPTED			
419-08-3890	TOMMIE ANDERSON	8 5 0 5 = 18	2.935
420-21-1379	ERRICA AUTERY	6 5 0 4 = 15	2.883
419-08-6230	TONY GAYLE	8 5 N 3 = 16	2.038
421-86-4472	TARA HAYNES	4 7 L 6 = 17	3.281
419-13-5866	GRETCHEN HORTON	7 7 N 9 = 23	2.596
421-02-5985	URSULA NORFLEET	18	2.690
416-13-2352	FELISHA WRIGHT	3 4 0 5 = 12	2.511

NATIONAL AVG FOR MCAT SCORES 7.7 7.7 0 7.7 = 23.1
STANDARD DEVIATIONS 2.46 2.3 2.4

2 STUDENT APPLIED - 2 ACCEPTED TO DENTAL SCHOOL
13 TOTAL APPLICANTS FOR THE U OF A-2 BLACK APPLICANTS=15%

422-98-6720 LISA CHATMAN 2.559
231-98-8922 ROLLINS CLARY 16 15 13 19 16 14 19 16 2.673
SCORE OF 15 IS SET FOR NATIONAL AVERAGE
1 STUDENT ACCEPTED INTO MASTERS IN HEALTH ADMINISTRATION PROGRAM
419-08-3890 TOMMIE ANDERSON 2.935

1 STUDENT ACCEPTED INTO PODIATRY SCHOOL
419-08-6230 TONY GAYLE 2.083

APPENDIX B

Retention Data for 1991-93

Student Category	Graduated	Left School	Returned
SSP (N = 70)	15	7	0
Non-SSP (N = 69)	12	19	3

Appendix C

IMPROVING RETENTION OF BLACK STUDENTS IN PREMEDICAL PROGRAMS

FIPSE GRANT P116AD114

FALL 1993

PROGRAM EVALUATION

PREPARED BY:

M. Christine Nagy, Ph.D.

Health Research Consulting Service

College of Community Health Sciences

The University of Alabama

Program Evaluation

The first six months of the program focused on developing the evaluation component, identifying specific outcome variables as well as variables thought to impact on outcome measures. Data collection tools were developed; methods to collect relevant information were identified; and data entry and data analysis programs were established. Data collection instruments were piloted during the spring semester of 1991 and were used during the second and third years of the program.

Target Population:

The target population for the Support System Program (SSP) was black students enrolled in the prehealth professions program at The University of Alabama, Tuscaloosa. Students were informed about the SSP during orientation activities and invited to participate in the project. Students who attended sessions made up the treatment group (SSP) while those who did not comprised the comparison group (N-SSP).

Study Sample:

139 minority students participated in the study; 74 attended SSP group activities (we only have information on 70 since we had incomplete identification numbers on 4) and 69 provided data for comparison purposes. Background information on students is presented in Table 1. Of the 139 students, 77% were female and 23% were male; all were single. Students ranged in age from 18 to 29 with a mean of 21.5 years. SSP and N-SSP participants did not differ significantly on any of the background characteristics.

Data Collection:

Over the course of the project, data were collected on group meeting encounters, academic achievement, scores on standardized tests (for those who took them), measures of self-esteem, measures of social support, and application to health professions schools. We created separate files for each of the measures and merged them together for the final analysis.

The file on group meetings contains data on 24 meeting times from 74 students who attended sessions (four students did not provide identification numbers). The file on background information, academic achievement and scores on standardized tests has information on 139 students and accounts for 70 SSP members and 69 N-SSP members. The file on self-esteem contains data on 80 students of which 59 are SSP members and 21 are N-SSP members. The file on measures of social support includes data on 77 students of which 57 are SSP and 20 are N-SSP.

Figure 1 presents an overview of the data files as they relate to the SSP and N-SSP groups. Information on academic achievement was accessed through University records. Information on self-esteem and measures of social support have proven to be difficult to collect, especially on N-SSP students. After several mailouts, the number of self-esteem and social support measures was increased to 21 and 20 respectively for N-SSP students.

Support system program (SSP)

Students in the prehealth professions program were invited to participate in the SSP. During the two years of program implementation, 74 students attended one or more of the 24 planned SSP group activities. At each of the meetings, participants completed report forms.

Data from 349 encounter forms were recorded and analyzed. With respect to material presented at the sessions, most participants reported that the topics were either "important" (26%) or "very important" (74%); "informative" (23%) or "very informative" (77%); "interesting" (27%) or "very interesting" (73%); and "meaningful" (26%) or "very meaningful" (73%). In terms of the supportive nature of the group, participants felt either "comfortable" (28%) or "very comfortable" (72%) in the group; were "willing" (38%) or "very willing" (61%) to speak in the group; felt that the group was "supportive" (29%) or "very supportive" (70%) of their needs; and that the group was either "understanding" (32%) or "very understanding" (68%) of their needs. Table 2 presents response information on the material presented by month for meeting sessions and Table 3 provides information on the supportive nature of the group. Student perceptions of the meetings are similar to those expressed for the initial sessions of 1991-92. Overall, SSP group members were quite receptive to the material presented and as they have more exposure to the group, the more comfortable they felt and the more supportive they found the group.

Between September 1991 and April 1993, individual participation at SSP group meetings ranged from 1 to 24 sessions (based on report forms). Table 4 lists the frequency of attendance at meetings by semester, by academic year, and for the duration of the project. The majority of students attended one or two sessions each semester.

Outcome Variables

Application to a health professions school

By the end of the grant period, we anticipated that the program would result in a 10% increase in the number of black students who applied to a health professions school. Between 1987 and 1989, 246 students from the University of Alabama applied to medical, dental, and optometry school. Of the 246 students, 12 (5%) were black. Table 5 presents

the total number of applicants from the University of Alabama who applied to a health profession school between 1991 and 1993. During this time, 290 students made application of which 40 (14%) were black and accounts for a 30% increase in the number of applications made to a health professions school by black students. Of the 40 black applicants, 25 (63%) were accepted. 1991 was the pilot phase of the program and many students who applied to a health profession were instrumental in the development of the program. Of the 40 students who applied to a health profession, 8 participated in SSP group activities, and only one of these was not accepted in her chosen career. The program appears to have had positive impacts on the number of applications that were made to health professions schools.

Retention of students

Student records were used to track student grades, progress in school, and whether they changed majors. Of the 139 students in the study, 27 graduated from their course of study, while 26 left school. Two left because they were suspended and 3 left because they had to participate in the Gulf War but did return to the University. Of the 139 students, 89 remain at the University. We could only identify 1 student who changed major. Of the 27 students who graduated, 14 (52%) participated in the SSP group meetings. Of the 23 who left school, 20 (87%) were N-SSP students.

Academic achievement

By the end of the grant period, we anticipated that two-thirds of black students who make application to a health professions school and participated in the support program would have GPA's greater than or equal to 3.0. In addition, it was anticipated that these students' scores on standardized entrance exams would be within two standard deviations of national averages.

This section addresses academic achievement for all 139 student participants and then focusses on students who applied to a health profession school. We collected grade point averages for each student by semester. Table 6 shows the means and standard errors of grade point averages (GPA) by semester for SSP and N-SSP students. Mean GPA scores for SSP and N-SSP students are quite similar. Student T-tests identified significant differences between the groups on 4 of the 9 semesters (Table 6). SSP students had significantly higher mean GPA's than N-SSP students for Fall 1990 ($p=.02$), Fall 1991 ($p=.04$), and Spring 1992 ($p<.01$). N-SSP students had a significantly higher mean GPA than SSP students for Summer 1993.

We then took the overall semester GPA and compared the current GPA with the previous semester GPA. A "+" indicated that the GPA was stable or improved over the previous semester, while a "-" indicated a decline in GPA. Table 7

presents changes in grade point average from semester to semester. The proportion of SSP and N-SSP students with a "+" or a "-" is quite similar for each semester. Chi square analysis failed to identify significant differences between the groups on changes in semester grades.

Of the 40 students who applied to a health profession, 17 (43%) had GPA's that were greater than or equal to 3.0. Of the 8 students who applied and were in the SSP group, 3 (38%) had GPA's in this range. In order to reach our goal of 66%, we would have needed another 9 students with GPA's of 3 or more.

32 of the 40 students completed standardized entrance exams. We projected that 66% (n=26) of the applicants would have test scores within 2 standard deviations of the national averages. Our records show that 9 students (28%) scored within 2 standard deviations of the national averages, of which 3 participated in the SSP group.

Self-esteem

Through the peer support group meetings, the project hoped to improve a student's self-esteem. However, since self-esteem is slow to change, we didn't expect major changes on this variable. A modified version of the 25-item "How High is Your Self-Esteem" (see Appendix A) was used to assess self-esteem. Possible scores on the measure range from 0 to 25. Those with scores above 16 are categorized as having high self-esteem; those below 17 are categorized as having low self-esteem.

A total of 118 self-esteem inventories were completed by 80 students. This included 57 individuals who completed the form once, and 24 individuals who had completed the inventory two, three, or four times. Data on self-esteem will be reported for the N-SSP group and then for the SSP group.

Twenty-one N-SSP students completed the self-esteem inventory once. Scores ranged from 10 to 25 with a mean of 17 and a median of 16.5. Students scoring greater than 16 on the measure were considered to have "high self-esteem" and those scoring less than 17 considered to have "low self-esteem." 50% of the students were in the high 'range for self-esteem.

Among the SSP students, 35 completed the inventory once while 24 completed the inventory several times over the course of the program. Information on those who completed a single inventory is followed by data on those who completed several inventories. For the 35 students who completed a single measure of self-esteem, scores ranged from 2 to 25 with a mean of 17 and a median of 18. 66% scored in the high range. For the 24 who completed multiple measures, 'pre' self-esteem scores ranged from 11 to 23 with a mean of 18.0 and median of 19. 58% of the SSP students had high self-esteem. At 'post' assessment, scores ranged from 12 to

24 with a mean of 18.5 and a median of 20. 75% scored in the high range.

Analysis of variance was used to compare the mean self-esteem scores of the N-SSP students with the single SSP and 'pre' SSP students (means of 17, 17, and 18 respectively). Significant differences were not identified on self-esteem among the three groups (p=.44). Paired t-test was used to compare the mean scores of the first and last self-esteem measures for 24 SSP students (means of 18 and 18.5 respectively). Although the proportion of students scoring in the high range of self-esteem did increase, paired t-test failed to identify significant differences between pre and post scores over the two intervals (p=.28).

Measures of Social Support

A modified version of Dressler's social support measure was used to assess students' social support network. Possible support persons included a spouse or family member, a roommate or friend, a faculty member, the leader of their support group, a member of their support group, and the health professions advisors Ms. Thomley and Mr. Dobynes or Ms. Moore.

A total of 95 social support measures were completed by 77 students. This included 20 N-SSP students who completed the inventory only once and 57 SSP students (25 completed the inventory two, three, or four times; and 32 completed it only once).

Data on the 20 N-SSP students who completed a single social support inventory are presented as counts in Table 8. As expected, family members were called upon most frequently for matters relating to finances, living arrangements, relationships, and illness. With the exception of financial matters, a roommate or friend was also frequently consulted about living arrangements, relationships and during illness. Faculty, support group personnel and health professions advisors played minimal support roles in these matters. However, they were called upon more frequently than family members and friends for inquiries about course selection, problems with coursework, and career choices. In fact, Mr. Dobynes/Ms. Moore was the person identified most frequently to provide advice on school and career choices.

Data on the 32 SSP students who completed a single measure are presented in Table 9. Data on the 25 who completed both pre and post measures are presented in Table 10 and Table 11 respectively. SSP students were very similar to N-SSP students in terms of their perceptions on sources of social support. However, they did consult the support group leader and members more frequently for advise relating to school matters than N-SSP students.

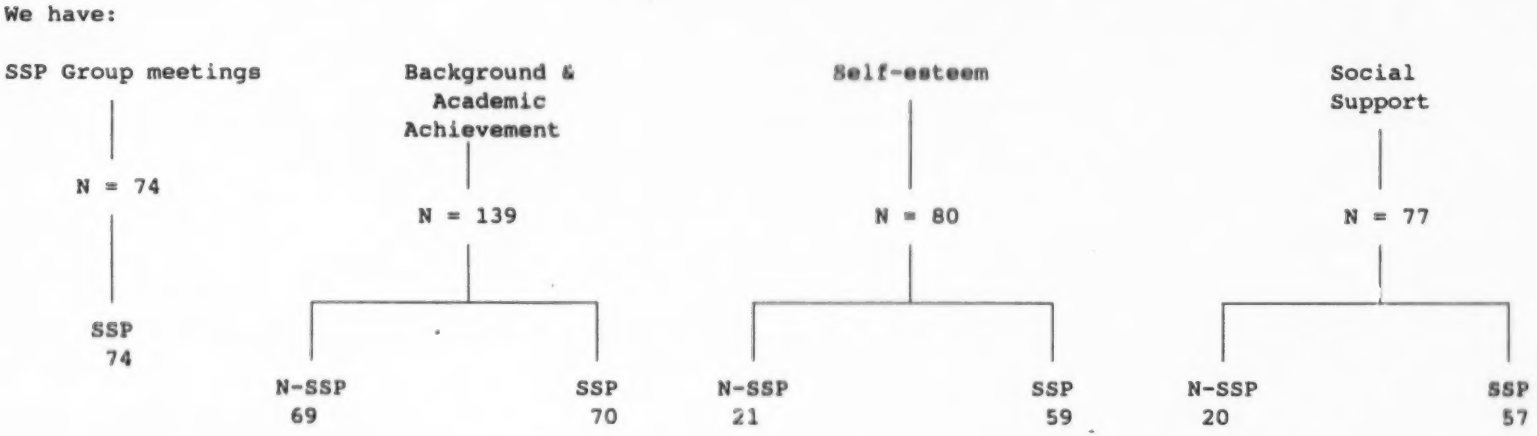
APPENDIX C

SUPPORTING TABLES

Table 1. Background Information of SSP and N-SSP Students as of October 1993

	Group	
Characteristic	SSP	N-SSP
N	70	69
Gender (%)		
male	27.1	18.8
female	72.9	81.2
Marital Status (%)		
single	100.0	100.0
Age		
mean	21	22
range	18 - 29	20 - 26

Figure 1. Status of data collection as of October 1, 1993 and SSP status*



* SSP = SSP participant
N-SSP = non-SSP participant

Table 2. Feelings about the topic

Meeting #	N	Very Important/ Important		Very Informative/ Informative		Very Interesting/ Interesting		Very Meaningful/ Meaningful	
Sep 91	34	70.6	29.4	82.4	17.6	79.4	21.5	76.5	23.5
Oct 91	25	96.0	4.0	92.0	8.0	92.0	8.0	88.0	12.0
Nov 91	30	53.3	46.7	60.0	40.0	50.0	50.0	50.0	50.0
Jan 92	34	64.5	35.5	51.5	48.5	57.6	42.4	57.6	42.4
Feb 92	29	82.8	17.2	86.2	13.8	82.1	17.9	71.4	28.6
Mar 92	36	82.9	17.1	75.0	25.0	75.0	25.0	81.8	18.2
Apr 92	7	57.1	42.9	85.7	14.3	85.7	14.3	85.7	14.3
Sep 92	43	81.4	18.6	82.9	17.0	73.2	26.8	78.0	22.0
Oct 92	30	75.9	24.1	76.7	23.3	70.0	30.0	66.7	33.3
Nov 92	27	66.7	33.3	81.5	18.5	70.4	29.6	66.7	33.3
Jan 93	19	81.3	18.7	94.4	5.6	82.4	17.6	75.0	25.0
Feb 93	16	87.5	12.5	93.8	6.3	81.3	18.8	87.5	12.5
Mar 93	9	77.8	22.2	66.7	33.3	77.8	22.2	88.9	11.1
Apr 93	10	55.6	44.4	50.0	50.0	50.0	50.0	55.6	44.4

Table 3. Feelings about the SSP group

Meeting #	N	Very Comfortable/ Comfortable		Very Willing to Speak/ Willing to Speak		Very Supportive/ Supportive		Very Understanding/ Understanding	
Sep 91	34	73.5	26.5	50.0	50.0	64.7	35.3	55.9	44.1
Oct 91	25	84.0	16.0	68.0	32.0	84.0	16.0	80.0	20.0
Nov 91	30	56.7	43.3	50.0	46.7	66.7	33.3	63.3	36.7
Jan 92	34	63.6	36.4	48.5	51.5	60.6	39.4	57.6	42.4
Feb 92	29	82.8	17.2	82.8	17.2	86.2	13.8	75.9	24.1
Mar 92	36	75.0	25.0	70.6	26.5	69.7	30.3	71.9	28.1
Apr 92	7	83.3	16.7	83.3	16.7	66.7	33.3	66.7	33.3
Sep 92	43	60.5	39.5	47.6	47.6	61.9	35.7	54.8	45.2
Oct 92	30	73.3	26.6	63.3	30.0	72.4	27.6	75.9	24.1
Nov 92	27	74.1	25.9	51.9	48.1	77.8	22.2	81.5	18.5
Jan 93	19	78.9	21.1	53.3	46.7	87.5	12.5	87.5	12.5
Feb 93	16	87.5	12.5	81.3	18.8	81.3	18.8	81.3	18.8
Mar 93	9	66.7	33.3	55.6	44.4	55.6	44.4	55.6	44.4
Apr 93	10	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0

Table 4: Frequency of attendance at meetings

	Fall 1991	Spring 1992	Fall 1992	Spring 1993
# of meetings	n	n	n	n
1 or 2	21	31	21	17
3 or 4	7	7	7	6
5 or 6	6	5	7	2
7 or 8	1	2	1	0

	Fall 1991 & Spring 1992	Fall 1992 & Spring 1993	Fall 1991 through Spring 1993
# of meetings	n	n	n
1 or 2	26	17	31
3 or 4	9	11	15
5 or 6	9	7	9
7 or 8	4	5	9
9 or 10	3	1	4
11 or 12	2	1	3
13 or 14	-	-	1
15 or 16	-	-	1
17 or 18	-	-	1
18 + (24)	-	-	1

Table 5: Non-SSP Students' Support Networks

THE FOLLOWING CHECKLIST ASKS WHOM YOU WOULD TURN TO FOR DIFFERENT KINDS OF SUPPORT. PLEASE CHECK THE BOX IF YOU WOULD ASK THAT PERSON FOR THE PARTICULAR KIND OF ASSISTANCE.

Would you ask	Help if you feel nervous or upset?	Help if you are sick?	Advice about financial affairs?	Advice about living arrangements?	Advice about relationships (social/family)?	Advice about the selection of courses to take?	Advice about problems with coursework or teachers?	Advice about career choices?
A family member/spouse for	16	17	16	16	17	7	8	11
A friend/roommate for	17	15	6	15	14	10	11	8
A faculty member for	2	1	4	1	1	13	15	15
The leader of your support group for	6	3	2	2	0	9	9	8
A member of your support group (not the leader) for	3	4	2	5	3	9	10	6
The health professions advisor (Ms. Thomley) for	0	1	3	0	0	15	11	14
The health professions advisor (Ms. Moore) for	3	4	5	2	3	17	12	15

Which of the following do you consider to be the **most important** person in discussing your problems? **Please check only one.**

12	Family member/spouse	1	Faculty member	1	Health professions advisor
4	Friend/roommate	1	Someone from your support group	1	Other (specify _____)

Table 6: SSP Students' Support Networks (not matched)

THE FOLLOWING CHECKLIST ASKS WHOM YOU WOULD TURN TO FOR DIFFERENT KINDS OF SUPPORT. PLEASE CHECK THE BOX IF YOU WOULD ASK THAT PERSON FOR THE PARTICULAR KIND OF ASSISTANCE.

Would you ask	Help if you feel nervous or upset?	Help if you are sick?	Advice about financial affairs?	Advice about living arrangements?	Advice about relationships (social/family)?	Advice about the selection of courses to take?	Advice about problems with coursework or teachers?	Advice about career choices?
A family member/spouse for	23	26	25	24	21	12	16	17
A friend/roommate for	19	17	10	19	22	17	18	12
A faculty member for	3	3	7	5	0	21	21	18
The leader of your support group for	7	3	5	2	3	19	20	18
A member of your support group (not the leader) for	11	4	4	4	4	14	14	12
The health professions advisor (Ms. Thomley) for	5	4	7	2	0	10	21	23
The health professions advisor (Ms. Moore) for	11	6	13	4	2	25	28	28

Which of the following do you consider to be the **most important** person in discussing your problems? **Please check only one.**

17	Family member/spouse	3	Faculty member	1	Health professions advisor
8	Friend/roommate	0	Someone from your support group	2	Other (specify _____)

Table 7: SSP Students' Pre Support Networks

THE FOLLOWING CHECKLIST ASKS WHOM YOU WOULD TURN TO FOR DIFFERENT KINDS OF SUPPORT. PLEASE CHECK THE BOX IF YOU WOULD ASK THAT PERSON FOR THE PARTICULAR KIND OF ASSISTANCE.

Would you ask	Help if you feel nervous or upset?	Help if you are sick?	Advice about financial affairs?	Advice about living arrangements?	Advice about relationships (social/family)?	Advice about the selection of courses to take?	Advice about problems with coursework or teachers?	Advice about career choices?
A family member/spouse for	22	23	22	20	21	16	13	14
A friend/roommate for	16	11	4	14	17	9	10	7
A faculty member for	4	4	10	1	1	15	16	16
The leader of your support group for	6	4	3	3	2	14	12	11
A member of your support group (not the leader) for	2	2	1	3	2	10	12	9
The health professions advisor (Ms. Thomley) for	4	2	8	2	0	13	13	16
The health professions advisor (Ms. Moore) for	7	5	12	5	3	18	17	22

Which of the following do you consider to be the **most important** person in discussing your problems? **Please check only one.**

21	Family member/spouse	1	Faculty member	1	Health professions advisor
1	Friend/roommate	1	Someone from your support group	1	Other (specify _____)

Table 8: SSP Students' Post Support Networks

THE FOLLOWING CHECKLIST ASKS WHOM YOU WOULD TURN TO FOR DIFFERENT KINDS OF SUPPORT. PLEASE CHECK THE BOX IF YOU WOULD ASK THAT PERSON FOR THE PARTICULAR KIND OF ASSISTANCE.

Would you ask	Help if you feel nervous or upset?	Help if you are sick?	Advice about financial affairs?	Advice about living arrangements?	Advice about relationships (social/family)?	Advice about the selection of courses to take?	Advice about problems with coursework or teachers?	Advice about career choices?
A family member/spouse for	22	23	23	23	20	8	9	12
A friend/roommate for	13	11	2	16	18	12	11	9
A faculty member for	3	1	4	3	2	16	14	14
The leader of your support group for	5	1	2	5	2	13	16	10
A member of your support group (not the leader) for	6	3	2	7	3	10	12	9
The health professions advisor (Ms. Thomley) for	4	3	10	6	1	15	14	14
The health professions advisor (Ms. Moore) for	6	3	10	7	2	22	23	20

Which of the following do you consider to be the **most important** person in discussing your problems? **Please check only one.**

22	Family member/spouse	1	Faculty member	1	Health professions advisor
1	Friend/roommate	0	Someone from your support group	0	Other (specify _____)

Table 9. Means and standard errors of semester grade point average by SSP status

Semester	GPA					
	SSP			N-SSP		
	n	$\bar{X}$	Std error	n	$\bar{X}$	Std error
1st Year						
Fall 90	34	2.56	.120	60	2.20	.101
Spring 91	31	2.52	.136	64	2.24	.097
Summer 91	13	2.85	.173	24	2.37	.182
2nd Year						
Fall 91	52	2.53	.105	63	2.00	.809
Spring 92	51	2.73	.094	63	2.35	.107
Summer 92	14	2.72	.187	16	2.95	.212
3rd Year						
Fall 92	50	3.00	.725	51	2.37	.102
Spring 93	45	2.44	.116	42	2.57	.129
Summer 93	15	2.20	.199	19	2.98	.203

Table 10. Change* in grade point average by SSP status

Semester	GPA					
	SSP			N-SSP		
	n	% -	% +	n	% -	% +
Fall 90 - Spring 90	20	50	50	37	49	51
Spring 91 - Fall 90	30	57	43	59	49	51
Summer 91 - Spring 91	12	42	58	23	52	48
Fall 91 - Summer 91	13	61	39	23	65	35
Fall 91 - Spring 91	31	48	52	59	56	44
Spring 92 - Fall 91	51	37	63	58	35	65
Summer 92 - Spring 92	13	31	69	16	38	62
Fall 92 - Summer 92	11	64	36	12	67	33
Fall 92 - Spring 92	37	43	57	48	44	56
Spring 93 - Fall 92	44	57	43	41	42	58
Summer 93 - Spring 93	15	60	40	19	32	68

* Change - reduction in GPA
+ Stable or improvement in GPA

APPENDIX D

Information for FIPSE

The experience of being a project director for a FIPSE grant was a very positive one, and I strongly recommend to colleagues that they consider the possibilities for FIPSE support as they think about implementing innovative ideas. Some points that come to mind as I review the three years as a project director are as follows:

(1) We appreciated the flexibility allowed by FIPSE in some areas of grant administration. In particular, we were helped by adjustments in our budget after the first year that allowed us to address some needs that we overlooked in our original application. This included using funds for unanticipated travel and for printing a program information pamphlet (copy attached).

(2) Our contacts with FIPSE staff members were all very positive. Ms. Jamie Lewis was a very helpful telephone consultant during the first two years of the grant. Mr. Johnson was our project officer for the past year, and visited our program in March 1993. His visit was a very constructive experience. My only recommendation in regard to site visits is that they might be even more helpful if scheduled in the first two years of a project.